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CRIME PATTERNS DURING THE MARKET TRANSITION IN CHINA

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A sizable literature on crime patterns during periods of social change and modernization has been developed. A number of theories have been proposed to explain variations in crime levels; these theories have largely been rooted in the classical Durkheimian theory of anomie. Most empirical studies of crime patterns examine levels of violent and property crimes and link variations in the levels of these crimes to indicators of social change and modernization using cross-national data. Moving beyond the conventional focus on levels of violent and property crimes, the present study focuses on whether rates of economically motivated crimes (e.g. larceny, grand larceny, robbery and fraud) increased faster than less or non-economically motivated crimes (e.g. homicide, assault and rape) during the period of social change from state socialism to a market economy in China. The study finds that economically motivated crimes have increased faster than less or non-economically motivated crimes. The paper is in favour of a structural explanation that expanding economic motivation is a driving force for economically motivated crimes during the transition to a market economy in China. This explanation is more consistent with the patterns of crime found than conventional anomie-based explanations in their accounting for the crime patterns.

Introduction

Examining and reporting patterns of crime in society have always been an important undertaking in criminological research. These studies provide indispensable information about crimes and form indispensable bases in the development of theoretical explanations. A sizable literature on crime patterns during social change has been developed, especially since the 1970s. The classic work in this field is Durkheim's anomie theory. Based on his examination of rising crime during the Industrial Revolution in France, Durkheim proposed that the breakdown of traditional cultural values, or anomie, is the social source of rising levels of crime during periods of rapid social change (Durkheim 1893; 1897). In modern times, a number of variants of Durkheimian theory have been proposed (Merton 1938; Shelley 1981; Elias 1978; Messner and Rosenfeld 1994; 1997). Most empirical studies examining crime patterns during periods of social change and modernization have employed cross-national data (Bennett 1991), linking levels of crimes to indicators of stages and levels of modernization (see LaFree 1999; LaFree and Kick 1986; Neapolitan 1997; Neuman and Berger 1988 for reviews of the literature). Although there are important variations among different theories, anomie has been the dominant perspective for explanations of variation in crime levels. Theorists have shown that their theses are largely consistent with the patterns of variation in levels of violent and property crimes.

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Important limitations exist in several major aspects of the study of crime patterns during periods of social change. First, studies have conventionally focused on variations in crime levels, ignoring entirely other patterns of change, particularly the rate of change in crimes: if all crimes are predicted to increase, what types of crime increase at faster rates than other crimes? An in-depth examination of crime patterns should include an examination of the rate of increase for various crimes, and not focus solely on studying levels of crimes. The present study will show that findings on the rates of change can have important implications for theoretical explanations of crime patterns during social change.

Secondly, studies typically rely on data that are geographically imbalanced and heavily weighted toward developed nations (Neapolitan 1997). Countries such as China and other formerly socialist countries are entirely neglected. Given the significance of the social change in these countries in recent decades, ignoring these countries renders our knowledge unbalanced and incomplete. Studying crime patterns in these countries during their periods of social change can offer vital insights and improve our understanding of crime patterns during social change.

Thirdly, studies have been conventionally framed under the conventional classification of property crimes versus violent crimes, and have been focused on theft versus homicide in particular. Other typologies are typically ignored. The present study focuses on economically motivated crimes versus non-economically motivated crimes. Finally, processes of social change are intrinsically longitudinal. Patterns of crime occur in social processes in a temporal sequence. The usual cross-national design does not catch the temporal features of the social process when examining patterns of crimes during social change.

Since late 1978, China has carried out profound economic reforms and modernization programmes, and experienced dramatic social change. From 1978 to 2003, China's real GDP's average yearly increase was 9.47 per cent, while from 1978 to 1999—the period for which crime series data are analysed in this paper—the total crime rate increased more than threefold, from 55.91 to 178.82 per 100,000 people (Press of Law Yearbook of China 1987–2000). The social change in China from a state socialist society to a market economy represents an important form of social change in the contemporary world. Given the importance of China as the fastest growing product market with the largest population in the world, examining China's crime patterns during the period of social change will make an important contribution to the literature, and provide important insights into the development of theoretical explanations. Moving beyond the limitations of crime pattern research, the present study focuses on examining the rate of change in the Chinese crime series from 1978 to 1999, and proposes that expanding economic motivation is an important driving force for the change in crime patterns during the market transition in China. The paper shows this explanation is more consistent with the patterns of crime found in the analyses than the conventional anomie-based perspectives.

Theories and Research of Crime Pattern during Social Change

Changes in crime patterns during periods of social change or modernization have been a long-standing topic in social science (Durkheim 1893; 1897; Tarde 1902; Bonger 1916; Engels 1845; Clinard and Abbott 1973). Based on examinations of the

variation in levels of violent and property crimes, a number of theoretical perspectives have been proposed; most of them have their roots in the Durkheimian classical anomie/modernization theory. Durkheim's theory explains that the pattern of rising crime during rapid social change results from the breakdown of traditional values, or anomie (Durkheim 1893; 1897). Developing Durkheim's anomie idea, Merton proposed his version of anomie theory (1938). Among various modern modifications of the Durkheimian anomie/modernization thesis, the most elaborated version is Shelley's thesis (Shelley 1981). Shelley posits that crime levels change during the process of modernization, depending on the stage of the development process, as causes of crime change over different stages of modernization. Property crimes become the most prominent crimes in early stages due to anomie, social disorganization and weak control. Violent crime also increases in the early stages of modernization, since newly arriving migrants from rural areas bring traditions of violence associated with rural life into the city. As rural migrants become adjusted to urban life in the later stages of modernization, violent crime decreases. In later stages of modernization, violent crimes are committed during the commission of property crimes. Another perspective that discusses crime patterns during social change is Elias's (1978) thesis of the civilizing process. This view argues that levels of crime and violence should decrease as a society becomes more modernized and citizens become more civilized.

A recent macro theory of relevance is Messner and Rosenfeld's (1994; 1997) 'institutional anomie theory'. The theory argues that the anomic feature of American culture and imbalanced institutional structure is a basic characteristic of American society. American culture, represented by the American dream, contributes to high crime rates by encouraging people to employ illegal means to achieve culturally approved goals; the dominance of economic institutions diminishes the capacity of other institutions such as family, education and the political system to curb anomic criminogenic cultural pressures and to impose controls over the behaviour of members of society. Due to institutional anomie, persistently high crime rates are a basic feature of crime patterns in America.

Although they vary in certain aspects, all major existing theories are largely rooted in the Durkheimian anomie concept, which is defined as the breakdown of traditional collective cultural values. The present study does not focus on examining the differences among these anomie-based theories, but instead explores a new explanation of expanding economic motivation to explain the crime patterns found. In contrast to the conventional anomie-based theories, the economic motivation thesis proposed here puts more emphasis on structural reasons within a society, and is more consistent with the changing patterns of crime rates during the social change from a state socialist economy to a market economy in China.

As noted before, past work has focused exclusively on the variations in crime levels, particularly the levels of violent and property crimes. Most empirical studies have been conducted since the 1970s (e.g. Krohn 1976; 1978; Wellford 1974; Krohn and Wellford 1977; MacDonald 1976; Braithwaite and Braithwaite 1980; Hansmann and Quigley 1982; Hartnagel 1982; Conklin and Simpson 1985; Groves *et al.* 1985; Messner 1980; 1982; 1985; Avison and Loring 1986; LaFree and Kick 1986; for review, see Neuman and Berger 1988; Neapolitan 1997; LaFree 1999). These studies link crime levels to indicators of modernization and social change, using predominantly cross-national data (Bennett 1991; Ortega *et al.* 1992). Earlier cross-national studies have commonly

reported the crime pattern that modernization and development are associated with increases in property crime level (mostly measured by theft) and decreases in violent crime level (mostly measured by homicide). Kick and LaFree (1985) proposed an opportunity thesis to explain these crime patterns. Their thesis explains that development enhances urbanization, which decreases interpersonal ties and contact among intimates and acquaintances, thereby reducing interpersonal violence. However, development increases property crime, in particular theft, because it increases the supply of readily available commodities in environments generally characterized by ineffective surveillance, and therefore generates more opportunities for theft (Kick and LaFree 1985; LaFree and Kick 1986). More recent studies have reported mixed results for crime patterns (Neapolitan 1997).

Focusing on crime levels may overlook important patterns in crimes, leading to important theoretical consequences. To distinguish the focus of the present study from that of existing theories, we may describe the existing theories as 'theories of crime levels'. The existing theories do not address an important aspect of crime patterns—the rate of change in crime levels: as all crimes are predicted to increase in the early stages of social change or modernization, do property crimes increase faster than other crimes or vice versa? What types of crimes increase at greater rates than conventional violent street crimes under a certain context? The rate of change in crime rates consists of in-depth knowledge of crime patterns. The existing theories have not predicted that some crimes will increase faster than others during times of social change, and have not offered any explicit explanations.

Methodologically, the cross-national data predominantly used in past studies cannot address questions about rate of change in property crimes and violent crimes, or relative rate of increase in crime. Other major limitations of the cross-national design will be discussed in detail in a later section on the longitudinal approach to the study of crime patterns. Also, as noted before, past studies are largely based on the experiences of advanced Western capitalist societies or the social transitions of industrialization, decolonization, modernization and development that occurred in third world societies after the Second World War and in the 1960s and 1970s. Neapolitan (1997) points out that most cross-national research has included small samples of nations that have been geographically imbalanced and heavily weighted toward the developed nations. He questioned the suitability of models developed for modern, industrialized nations when applied to developing nations. Neapolitan's criticism suggests that different models may be required for different contexts of social change. Crime patterns and their underlying causal mechanisms may vary, depending on the social context of social change.

Transition to a Market Economy and Expending Economic Motivation in China

In the 1980s and 1990s, a fundamental social change from state socialism towards a market economy swept over the majority of previously socialist countries in Eastern Europe and Asia (Gerber and Hout 1998; Róna-Tas 1994; Walder 1994). A sizable literature has been developed on the social transition from state socialism to a market economy. Important works include theoretical development of the social transition (Nee 1989; 1991; 1996; Nee and Yang 1996), stratification dynamics (Zhou *et al.* 1996; Xie and Hannum 1996; Bian 2002), workplace (Bian 1994; Davis 1992; Lin and Bian 1991;

Walder 1992) and political authority (Walder 1995*a*; 1995*b*). However, few papers have addressed changes in crime patterns during this social change, except for some general descriptive reports on crime levels (e.g. Liu 2001; Rojek 1996; Xiao 1988).

A distinctive feature of the social change from a state socialist society to a market economy is the sharp contrast in its orientation to economic motivation. I argue that a major characteristic of socialist society is the institutionalized suppression of individuals' economic motivation. A socialist command economy is based on state and collective ownership of enterprises, centralized state plans and a relatively egalitarian income distribution (Whyte and Parish 1984: 44). The system demands that individuals place the state and collectives' goals above personal interests. The political institution of a socialist society embodies the party-state ideology, which highly emphasizes the individual's obedience to the state and collectives. Pursuing personal economic interests is considered a standard 'bourgeoisie' or 'capitalist' orientation. The party-state policy virtually prohibits individual economic ambition. Political campaigns and frequent and regular political education are employed to further socialist values. Socialist societies are largely 'closed' to advanced capitalist societies to prevent the invasion of capitalist political ideology, commercialism, individualism and consumerism. These features of the institutional arrangement deeply suppress individuals' economic motivation. Over the decades, socialist societies have been characterized by a lack of entrepreneurial spirit, enterprise inefficiency, economic stagnation and consumer deprivation (Davis 2000).

In contrast, a market economy is based on active entrepreneurial spirit and individuals' strong economic motivation, which is often expanded to extremes to survive the fierce competition of the free market. Market institutions embody the value orientation that promotes personal economic ambition, expectation of monetary achievement, entrepreneurial spirit and individualism. The seeking of selfish economic interests through free competition in a free enterprise system is believed to best facilitate the growth of the economy (Hagen 1962; Inkeles 1983; Inkeles and Smith 1974; Lerner 1958; 1968; Levy 1966; McClellend 1961; Parsons 1966; 1977). The social transition from a socialist society to a market economy involves profound institutional change. A central feature of the transition is that institutionalized suppression of economic motivation is removed as it has never been before, and economic motivation becomes strongly encouraged. The institutional change of party-state ideology involves complete disenchantment with the Communist party ideology (e.g. in Eastern Europe) and the considerable change (e.g. China) from suppressing individuals' economic motivation to justifying and promoting it (Walder 1996). Furthermore, along with the change to more open societies, exposure to commercialism, individualism, and consumerism from advanced capitalist societies stimulates the desire for wealth and material life (Davis 2000). In the transition to a new growing market economy, get-rich-quick examples inspire admiration and emulation, which further feed growing economic motivation (Rojek 2001). Together, these processes produce a dynamic process of explosively expanding economic motivation.

The existing anomie-based perspectives were developed with no consideration of these special features of the transition from state socialist societies to market economies, and thus do not explicitly consider the role of economic motivation. In the existing theories, rational economic motivation has not been at the centre of explanations for rising crime during periods of rapid social change. Most existing perspectives on crime patterns during periods of social change elaborate on the Durkheimian anomie explanation.

Various anomie-based perspectives have been the mainstays of the theoretical framework employed in empirical studies. These perspectives are certainly important in explaining the major aspects of processes of social change; however, they may be less effective in explaining the special features of the crime patterns under the social context of a dramatic change from state socialism to a market economy. Particularly the fact that economically motivated crimes increase faster than less or non-economically motivated crimes did during the social transition from a state socialist economy to a market economy in China during 1978 to 1999, as will be shown in the analyses below, is not explained. Therefore, to a considerable degree, existing theories have not considered the important role of rational economic motivation in the crime production process during the social transition from state socialism to a market economy. Although it is true that breakdown of traditional values is a source of rising crime, it is also clear that, in the meantime, a new 'getting rich' values consensus has developed; lack of values consensus as an explanation would ignore the effect of newly formed consensual social values. Although unregulated desire and frustration due to inequality caused many to feel strained, massive numbers of individuals reacted to it by 'plunging into the sea of business' (Davis 2000; Walder 1996). While the anomic cultural tolerance to illegal means has certainly increased as the 'institutional anomie theory' argues, many people do believe actions such as offering kickbacks are sound and legal business activities—to them, it is not the anomic cultural tolerance that has lead them to commit crime, but the expanding economic motivation to profit. Anomie-based perspectives share a common reliance on some intrinsic cultural expressive components of human action for explanations of criminal behaviour. These do not catch an important feature of the context of social change from state socialism to a market economy: the massively expanding rational economic motivation after the removal of institutionalized suppression of economic motivation.

Expanding economic motivation as an explanation has considerable implications for the prediction of crime patterns, differing significantly from the patterns predicted by existing perspectives. Anomie-based perspectives only predict rising levels of crime, since no reasons for non-uniformity in rates of change are given in anomie-based theories; crimes are similar in nature in so far as they are all reactions to anomie. Crimes should show no intrinsically different patterns beyond some having higher levels due to greater opportunities for committing them, such as property crimes. Simply, all crimes should rise during social change. However, if expanding economic motivation is considered as a primary cause of rising crime, crimes that are economically motivated should increase faster and increase in severity compared to other crimes as economic motivation rapidly expands during the period of rapid social change. This prediction is in contrast to the existing anomie-based perspectives' predictions of uniformly rising crime. Let's preliminarily define economic motivation as the human state of mind that evaluates profit-seeking actions with high priority in human choice of actions. As the general level of economic motivation in a society increases during the period of social change from state socialism to a market economy, a larger and larger volume of human activities are devoted to profit seeking actions; more and more members of society become involved in economically motivated actions; proportionately speaking, a larger and larger volume of deviant and criminal behaviours will be economically motivated. Therefore, the rates of economically motivated crimes will increase faster in comparison with other less or non-economically

motivated crimes during the process of social change from state socialism to a market economy.

China is an important case of social change from a state socialist society to a market economy. After decades of poor economic performance, China began its economic reforms in the late 1970s and has achieved remarkable success (Walder 1996; Davis 2000; Bian 2002). China's is now the seventh largest economy in the world and second only to Japan as Asia's largest economy; it is the world's third largest exporter, surpassing Japan and following only the United States and Germany; it is the fastest growing market for products (Kelley and Luo 1999; PRC State Statistical Bureau 1990–2004). Along with outstanding economic growth, crime has also greatly increased, as previously noted. Official statistics, news reports and scholarly studies have all reported increases in both property and less or non-economically motivated crime rates (Rojek 1996; Xiao 1988; Dai 1995; 1997; Liu and Messner 2001).

Since the economic reform began in 1978, profound institutional changes have removed decades of suppression of individual economic motivation (Walder 1996; Davis 2000). Waves of rapid increase of individual and family-based private businesses (*getihu*) spread from the countryside to the cities. Many state workers and cadres left their state jobs to pursue dreams of personal wealth. A popular fashion was called 'to plunge into the sea of business' (*xiahai*). Many others soon followed the get-rich-quick examples of others. To profit and to make money became a national movement (*quanming jingshang*) (Rojek 2001; Walder 1996).

In stimulating the rapid expansion of economic motivation, the change in party-state ideology played significant role. In China, the Communist Party holds paramount political status and influence. Since the late 1970s, the Party's ideology has shifted from Mao Zedong's radical doctrine to Deng Xiaoping's much more pragmatic approach (Ash and Kueh 1996; Walder 1996; Bian 2002). Economic motivation was no longer considered negative and harmful to the collective interest, but instead was seen as a necessary force for economic development (Walder 1996; Davis 2000). The Party controlled official media encouraged the entrepreneurial spirit and glorified successful individuals. 'To be rich is glorious!' was a popular slogan. The Party newspaper propagandized examples of 'thousand dollar households', 'ten thousand dollar households'—even 'millionaires'. Those lacking economic motivation were criticized as unfit for the development of a modern economy (Rojek 2001). Due to the open-door policy, since 1993, China has brought in more foreign investments than any other country except the United States. In 1998, China received the sixth highest number of foreign tourists in the world. By 1998, about 300,000 Chinese students had studied in foreign universities, mostly in the United States (PRC State Statistical Bureau 1990–9). However, the open door has also brought exposure to Western commercialism, individualism and consumerism, strongly stimulating economic motivation. Consumerism and monetary success have quickly become prevailing social values (Deng and Cordilia 1999; Anderson and Gil 1998; Schell 1988; Davis 2000). An indulgent and selfish new culture has quickly replaced the previous traditions of frugality, diligence and self-sacrifice (Rojek 2001).

China's context offers great insights into the research on patterns of crime during periods of social change. The remarkable economic growth and the extraordinary escalation of economic motivation suggest that conventional examination of variations in levels of crime is insufficient; we must move beyond the ordinary focus on levels of less

or non-economically motivated and property crimes, and carefully examine in more depth economically motivated crimes and their rate of increase relative to conventional crimes to further our knowledge of crime patterns during periods of social change from state socialism to a market economy.

The Longitudinal Contextual Approach

As noted before, the primary research design of empirical studies of crime patterns during periods of social change and modernization has been predominantly a cross-national design. Two critical problems stand out for studies using this design. First, cross-national data are known to be plagued with incompatibility problems due to social and political differences throughout the data-production process, including cross-national differences in crime definitions, reporting policy and practices, differences in criminal justice systems and its operations, and bias in sample selection. These problems have been amply documented in the literature (Archer and Gartner 1984; Huang and Wellford 1989; Lynch 1995). These problems have long been a major source of suspicion for cross-national studies and lack of confidence in their conclusions. Although many improvements have been made, the source of the problem cannot be eliminated. In fact, it is not known to what extent the mixed findings of cross-national studies of crime and modernization are due to these data problems.

The second problem with the cross-sectional design is that the data do not reflect an essential element of the process of social change: social change and its consequential crime patterns are intrinsically a temporally sequenced process. Theoretical perspectives of social change describe stages and processes, and have intrinsic sequential conceptual frameworks; the cross-national design does not reflect this conceptual feature of the theories, since cross-national data use different levels and stages of social change and development in different countries to measure changes in crime and the development of social change. Statistically speaking, the data reflecting a sequentially occurring process of social change are expected to be serially correlated, while cross-national data are assumed to be independently and identically distributed (i.i.d.), ignoring the autocorrelation among sequentially occurring historical events and observations.

Cross-national design has been popular perhaps because of its advantages in availability of data and ease in analytical technology—the i.i.d. data are readily analysable by simple regression analyses. However, the advantages come at a significant cost. To avoid data incompatibility between different countries, cross-national studies have been forced to narrow the scope of analyses to only analyse perhaps the most compatibly measured crimes: homicide and theft—most research ignores available data on other crimes. In fact, the idiosyncrasies of different contexts of social change are the greatest opportunities to increase our understanding of crime patterns in social change under different contexts. Rather than taking advantage of these opportunities, however, they were perceived as a source of undesirable difficulties under the cross-national approach.

The present study advocates a change in approach to one that uses a longitudinal design and emphasizes the importance of the features of the social context of social change. We may call this approach a 'longitudinal contextual approach'. Longitudinal designs and time-series data should be advocated and preferred when possible in studies of crime patterns during social change and modernization, since they are much more accurate measurements of the historical social change process and reflections of

conceptualization of the theories. Methodologically, by using data from one carefully selected social context/nation with theoretically meaningful features, the longitudinal design avoids the problems of incompatible data from heterogeneity of socio-political and geographic units. Substantively, this approach fully takes advantage of the distinctive features of social contexts of social change that offer significant insights into theoretical development and in-depth empirical explorations. To overcome the limitations in generalizability of findings due to results only from one country or one cultural setting, the cumulative research together covers other selected social contexts to form more systematic knowledge.

Data

The data this study obtained are yearly national total counts of homicide, assault, robbery, rape, larceny, grand larceny and fraud from 1978 to 1999, excepting assault, for which data are available only from 1980 to 1999. Crime rates per 100,000 people have been calculated. Fraud is defined as illegally obtaining money or property through cheating and is an independent category from larceny. Grand larcenies are thefts where more than 3,000 yuan or property with equivalent value is stolen. The data are compiled from the *Law Yearbook of China* (1987–98). Due to historical and political reasons, little crime data were published until 1987, when the first *Law Yearbook of China* was published. The Yearbooks are published in Chinese and they contain a section on Chinese crime and criminal justice statistics. These data are compiled and published by the Ministry of Public Security (the police) of China. All police departments covering all areas of China are required to follow the standardized national procedure to recode crimes and compile and report their data to the provincial Public Security (the police) Statistical Bureau, which then compiles the data covering the province and reports them to the (national) Ministry of Public Security. Unlike in the United States, where there are important variations across state laws, China has only one unified national criminal law and criminal procedural law. These laws are enacted by the national congress and issued by the central government. Local police departments record and report the data according to the unified national law and policy (Feng 2001).

Although official statistics have indispensable strengths, especially for serious crimes, problems with official statistics are well known. A large literature has been developed in criminology to deal with these problems. The limitations of official statistics in international research have been amply documented (Shelley 1981; Biderman and Lynch 1991; O'Brian 1985). These problems include changes in crime definitions and different reporting practices across geographic units. These concerns apply to the Chinese statistics too. Some studies have reported that Chinese official data have problems of underreporting (He and Marshall 1997; Yu and Zhang 1999; Dutton and Lee 1993; Dai 1995; Zhu *et al.* 1995), as well as possible problem of under-recording by the police. This pattern is similar to that in the United States (Maxfield *et al.* 1980; Yu and Zhang 1999). But the extent of underreporting of crimes is largely consistent (Yu 1993; Dai 1994; Yu and Zhang 1999). Despite these limitations, the data contain valuable information reflecting on patterns of crime. The present study takes proper analytical approaches that help to overcome or reduce the major concerns with the data.

One of the major problems with official statistics is changes in crime definitions. Considering the influence of inflation and growth in income, the Chinese government

changed the definition of larceny in 1992, although recording and reporting standards have been consistent before and after the change. This change led to a lower larceny rate after 1992. We make an adjustment to the larceny rates after 1992 following the method used by Cantor and Land (1985) to make the pre- and post-1992 data compatible. We calculate a multiplier for larceny rates after 1992 in the following way. We then use this multiplier, which is 1.7026, times the larceny rate after 1992 to adjust for the lower recorded rates due to the change in definition. Although this adjustment seems reasonable, caution must be exercised in the interpretation of the results for larceny.

Among the problems of official data, underreporting and under-recording are an important concern. That is, a certain proportion of crimes were not reported or not recorded by the police regularly. Due to crimes being reported and recorded at low levels, the official crime statistics will demonstrate a lower absolute level of change than the real level of change in crimes committed. Under the situation that the underreporting and under-recording rates are largely constant, the percentage change in the recorded crime rates will match the percentage change in the underlying 'real' rates. The analyses of the present study examine whether or not economically motivated crimes increase faster than conventional less or non-economically motivated street crimes by examining whether or not the differences in the rate of increase between economically motivated crimes (larceny, grand larceny, robbery and fraud) and less or non-economically motivated crimes (homicide, rape and assault) become larger and larger. The present study uses graphs to present the comparison. To make the trends comparable, the charts show indexed trends, which is the best method to show trend data at very differing rates. This method shows percentage changes, with the beginning year of the crime series indexed at 100. Each subsequent data-point on the graph shows the rate for that year as a percentage of the rate at the beginning year. For our data, the beginning year is 1978. The value of the method of using indexed trends is that trends are standardized and thus directly comparable when they are graphically compared.[1]

Besides the well documented problem of underreporting, especially for property crimes (He and Marshall 1997; Yu and Zhang 1999; Dutton and Lee 1993; Dai 1995; Zhu *et al.* 1995), there is a possibility that the rate of reporting for property and other economically motivated crimes may increase as the rapid shift towards a market economy might stimulate public preparedness to report economically motivated crimes. As the country embraces the profit motive, individuals who suffered economic loss might tend to take a more serious view of such losses, and become more inclined to report it to the police. The similar argument can be made for police recording practices. Although there has been no empirical study addressing this possible process, the possibility should be explicitly acknowledged.[2]

Another issue is that some less or non-economically motivated crimes are in fact economically motivated. One example is homicide, which is often economically motivated. The effect of less or non-economically motivated crime data including economically motivated offences is that this portion of the crimes increase the

[1] One reviewer has suggested this method to the author. The author greatly appreciates the suggestion and the comments.

[2] The suggested possible effect of economic reform process on rate of reporting is credited to one of the reviewers for the paper.

observed speed of increase in a less or non-economically motivated crime series, thus reducing the observed differences in rates of increase between economically motivated crimes and less or non-economically motivated crime series, since all crimes are increasing (Liu and Messner 2001), with economically motivated crimes expected to increase faster than less or non-economically motivated crimes. Given this fact, if we still observe the differences in observed rate of increase between economically motivated crimes and less or non-economically motivated crimes, the observed results strengthen our confidence that economically motivated crimes increase faster than less or non-economically motivated crimes, since if this portion of less economically motivated crimes were included correctly in the economically motivated crimes, the observed differences between the rates of increase would be a larger.

Analyses and Results

As noted before, a number of prior studies have reported changes in crime levels. The findings consistently show general increases in almost all crimes, with higher levels of property crimes than violent crimes (e.g. see Liu and Messner 2001). The present study focuses on examining the rates of increase of economically motivated crimes (larceny, grand larceny, robbery and fraud) relative to less or non-economically motivated crimes (homicide, rape and assault).

A rigorous examination of the relative trend of increase of crimes requires time-series modelling. In the analyses here, we avoid statistical jargon and use charts to show the trends of the crime series descriptively. For readers who are sensitive to statistical analyses, I include a brief introduction of the statistical methods used in the Appendix. The details of the statistical results, which concur with the findings shown in the charts presented here, are available upon request. I first present the rates of economically motivated crimes and less or non-economically motivated crimes from 1978 to 1999 in China in Table 1.

Table 1 shows the crime rates per 100,000 population for each of seven crimes. Economically motivated crimes include larceny, which has been adjusted for definition change, grand larceny, fraud and robbery. Less or non-economically motivated crimes include homicide, rape and assault. The Table examines the change of these rates over the years and shows a trend that all crime rates have increased during the period from 1978 to 1999. The Table also shows that each crime occurs at different levels, with larceny maintaining the highest level (48 per 100,000 population in 1978 and 197 per 100,000 in 1999), in comparison with other crimes during the same years (e.g. the homicide rate was 0.86 per 100,000 population in 1978 and 2.18 per 100,000 population in 1999). The difference in levels of different crimes renders the comparison of rates of increase for different crimes difficult. To facilitate the comparison, indexed trends are used and presented in charts, with the 1978 value of each crime rate indexed at 100.[3] Figure 1 shows the indexed trends for four economically motivated crimes.

[3] The missing value for assault in 1978 is estimated using the average rate of change in the first five years to facilitate the construction of indexed crime rate.

TABLE 1 *Crime rates per 100,000 persons from 1978 to 1999*

Year	Economically motivated crimes				Less or non-economically motivated crimes		
	Adjusted larceny	Grand larceny	Fraud	Robbery	Homicide	Rape	Assault
1978	48	0.58	1.07	0.58	0.86	2.38	
1979	58	0.87	0.98	1.26	0.95	1.67	
1980	65	1.07	1.56	1.46	0.85	2.51	1.54
1981	74	1.69	1.87	2.22	0.96	3.08	2.15
1982	60	1.52	1.74	1.62	0.92	3.48	2.00
1983	56		1.89	2.27	1.01	5.67	2.27
1984	38	1.57	1.29	0.70	0.86	4.28	1.39
1985	41	3.27	1.24	0.83	0.99	3.56	1.47
1986	40	3.92	1.36	1.13	1.07	3.64	1.71
1987	40	5.37	1.34	1.72	1.20	3.41	1.99
1988	59	10.99	1.70	3.27	1.44	3.07	2.40
1989	148	24.59	3.78	6.47	1.74	3.64	3.19
1990	163	25.84	4.79	7.20	1.86	4.18	3.95
1991	166	28.43	5.20	9.08	2.00	4.35	4.96
1992	98	21.43	4.01	10.68	2.06	4.25	5.11
1993	162	25.47	4.27	12.83	2.14	3.97	5.45
1994	162	29.64	4.81	13.29	2.22	3.68	5.66
1995	160	34.05	5.29	13.58	2.26	3.45	5.97
1996	146	33.01	5.69	12.35	2.08	3.50	5.64
1997	146	36.31	6.33	11.45	2.11	3.29	5.59
1998	178	50.02	6.66	14.04	2.22	3.28	6.48
1999	197	52.45	7.41	15.79	2.18	3.14	7.38

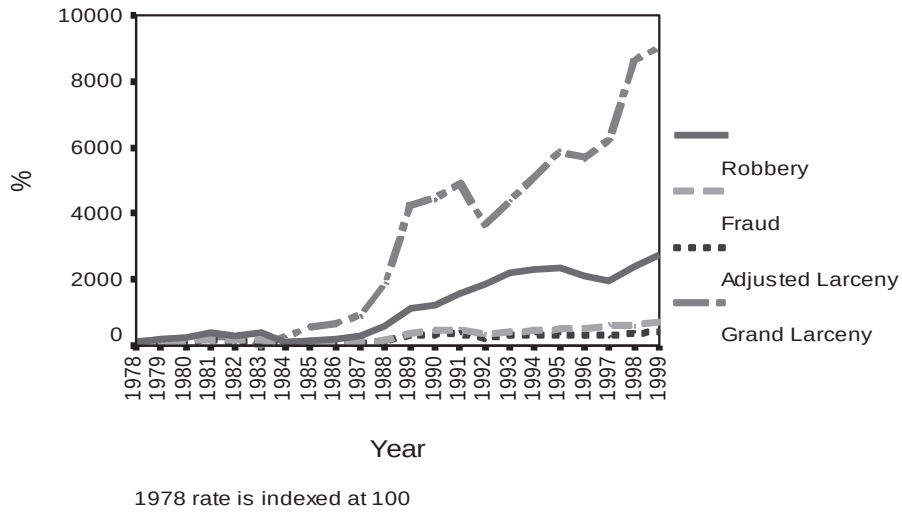

FIG. 1 Indexed trends of economically motivated crimes

Figure 1 shows that grand larceny has increased the fastest—an increase of 9042 per cent over 21 years. Robbery has increased 2722 per cent. Fraud has increased 692.4 per cent. Adjusted larceny rate has increased 414.2 per cent.

To show more detail for the larceny, fraud and robbery data, Figure 2 removed grand larceny, which increased the most, and only includes adjusted larceny, fraud and robbery. After removing grand larceny, the range of the vertical axis for Figure 2 was reduced to 3000 per cent, showing more detail.

To facilitate the comparison between economically motivated crimes and less or non-economically motivated crimes, the range of the vertical axis is further reduced to 600 per cent in Figure 3, to have an equivalent range and the same scale with Figure 4,

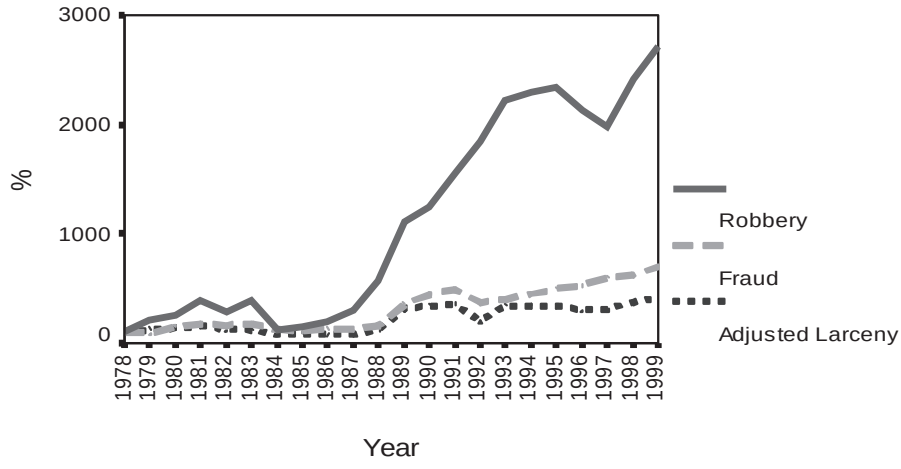

FIG. 2 Indexed trends of adjusted larceny, fraud and robbery (0–3000%)

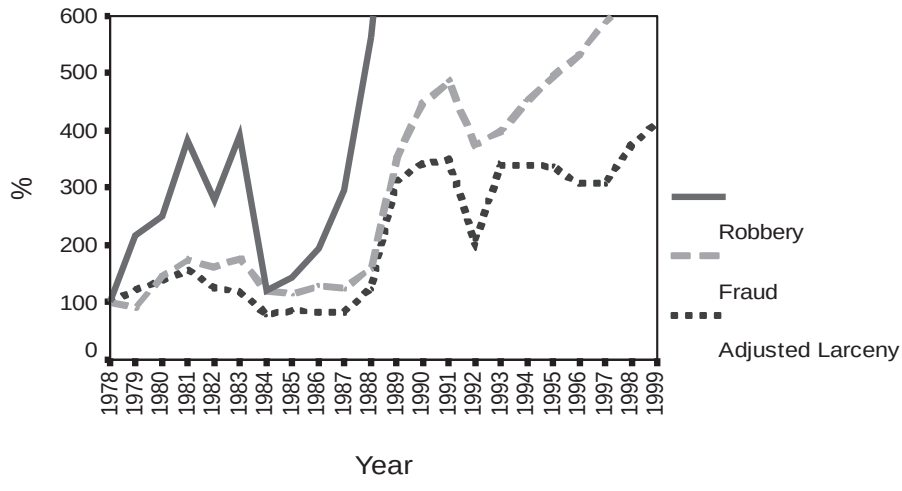

FIG. 3 Indexed trends of adjusted larceny, fraud and robbery (0–600%)

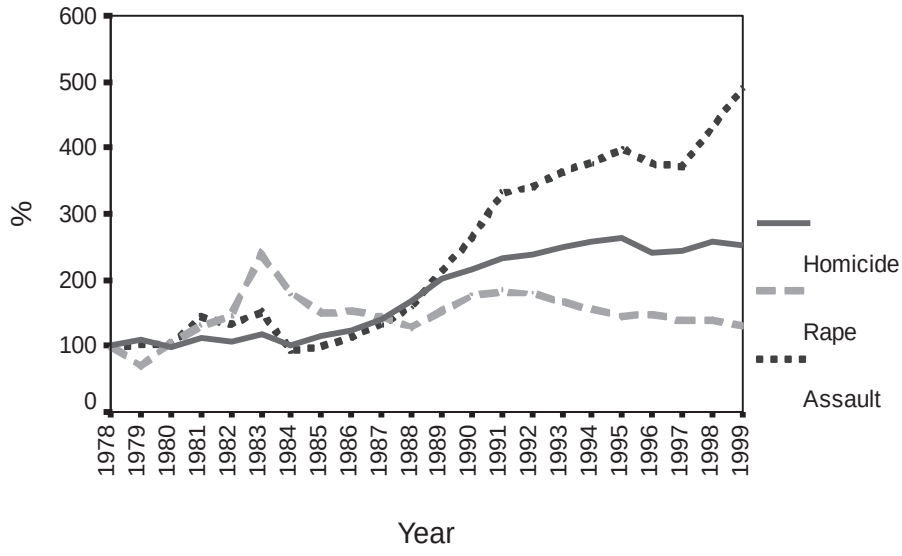

FIG. 4 Indexed trends of less or non-economically motivated crimes

which shows the change in three less or non-economically motivated crimes: homicide, rape and assault.

Comparing Figure 3 with Figure 4 shows that economically motivated crimes have generally increased faster than less or non-economically motivated crimes. The detailed calculation results are that homicide has increased 253 per cent during the period; rape has increased 131 per cent; assault has increased 491 per cent. These results indicate that among all 12 possible comparisons between the four economically motivated crimes and the three less or non-economically motivated crimes, 11 comparisons are consistent with the expectation that economically motivated crimes have increased faster than less or non-economically motivated crimes. One exception is that the rate of increase for assault is slightly higher than adjusted larceny (491 per cent for assault versus 414 per cent for larceny). However, this result may be due to the fact that many assaults are caused by economic disputes among persons, i.e. they are actually economically motivated, thus leading total assault to have a faster rate of increase. Overall, the results support the economic motivation explanation for the crime patterns. To increase confidence in the findings, more years of data should be used to examine the hypotheses again when data become available.

Conclusions and Discussion

Examining and understanding patterns of crime during periods of social change and modernization have been an important topic of social science. The patterns of crime during these periods inform important aspects of the process of social change. As reviewed before, while a large number of studies have addressed the patterns of crime,

the literature has conventionally focused on levels of crime. Empirical studies have consistently reported a higher level of property crimes than less or non-economically motivated crimes, but have reported mixed findings about the trend of property and less or non-economically motivated crimes. Existing theories vary in aspects, but they are largely rooted in the Durkheimian anomie perspective. As briefly reviewed before, there are important differences among these anomie-based theories; however, this paper does not aim to address or examine these differences, but to suggest a weakness of these theories together as a group in explaining crime patterns as opposed to a more structurally emphasized expanding economic motivation explanation for the faster rate of increase in economically motivated crimes during the social change from state socialism to a market economy.

Existing anomie-based theories conventionally focus on the explanation of variation in the levels of less or non-economically motivated and property crimes, while this paper proposes an 'economic motivation thesis', which stresses the necessity of further examining the rate of increase of economically motivated crimes relative to less or non-economically motivated conventional crimes. It reveals crime patterns that are largely overlooked and not explained by existing theories. The paper finds that economically motivated crimes generally increase at a faster rate than less or non-economically motivated crimes.

In interpreting the results of this paper, the analyses should not be viewed as a direct or conclusive test for the economic motivation thesis against existing anomie-based explanations. Satisfactory tests of a theory at the macro level are often difficult, since rarely are ideal data directly measuring all-important theoretical variables available. In the current case, it would be much better if valid and reliable macro measures of aspects of social change in China, especially direct economic motivation measures, were available, then a more direct test could be attempted. However, that is a very idealistic expectation, given the difficulties in accessing and evaluating the quality of possible macro data and accurately interpreting the meaning of these data. This study uses only much more uniformly defined crime series data, which, although limited, involve much fewer problems, and indeed reveal important patterns. Given the limitations of the data and analyses, the new patterns found in this study do distinguish between the predictions of existing theories and the economic motivation thesis argued here. It should be safe to say that crime patterns are more consistent with the proposed expanding economic motivation thesis than existing anomie-based perspectives, taking into account the faster rate of increase in economically motivated crimes during China's social transition. The caution is that these findings certainly cannot lead to a final conclusion about the merits of the economic motivation thesis.

A final caution is that the data are from only one country—China—for the period from 1978 to 1999. Further examination of similar data in other social contexts would be very important in evaluating the existing theories versus the economic motivation thesis.

Appendix: Statistical Methods

To examine whether or not one time-series increased faster than another series over time, a rigorous analysis requires modelling the trends of the two series to see whether one series has a statistically significantly different rate of increase relative to the trend

of the other series. Suppose we set less or non-economically motivated crimes as a convenient criterion to compare an economically motivated crime with, there are three possible situations: first, that a economically motivated crimes increases faster relative to less or non-economically motivated crimes, so the crime series shows a divergent pattern to less or non-economically motivated crimes; secondly, that an economically motivated crime increases slower relative to a less or non-economically motivated crimes, so the two series show a convergent pattern to each other; the final possibility is where the economically motivated crime is neither divergent from, nor convergent to, a less or non-economically motivated crime: rather, they are moving together at the same rate—this is called an equilibrium relation. In time-series terminology, the two series are called 'co-integrated'. It turned out that the data used for this study—crime rate series—are unit root processes.

$$y_t = \alpha + y_{t-1} + v_t$$

$$x_t = \alpha + x_{t-1} + w_t.$$

The most popular test for unit root is the Dickey-Fuller test, in a form similar to the following:

$$y_t = \alpha + \rho y_{t-1} + \delta_1 (y_{t-1} - y_{t-2}) + \delta_2 (y_{t-2} + y_{t-3}) + u_t.$$

The test checks whether $\rho = 1$. The lagged difference terms in the equation are used to eliminate autocorrelation. The test with these lagged difference terms is called the Augmented Dickey-Fuller Test. Since ρ is hypothesized to be 1, the usual critical values for the t-test are no longer valid. We use critical values based on MacKinnon (1991) in the statistical test.

Taking a first difference of a random walk, or random walk with a drift, the unit root will be eliminated and the series becomes stationary. This kind of series is called 'integrated order 1', denoted as *I(1)*. That is:

$$y_t - y_{t-1} = \alpha + u_t.$$

We say that the order of integration is 1, which is the number of differences needed to result in a stationary series. Since the differenced variable on the left in this equation is stationary, we can estimate the intercept α. First, we add differenced terms on the right to eliminate autocorrelation:

$$y_t - y_{t-1} = \alpha + \delta_1 (y_{t-1} - y_{t-2}) + \delta_2 (y_{t-2} - y_{t-3}) + u_t.$$

The concept of co-integration is derived from the fact that although each of the y_t and x_t series is non-stationary, their ratio may be stationary. When that is the case, the two series may be in equilibrium, i.e. they are co-integrated. For example, suppose series y_t and series x_t have a linear relationship:

$$y_t = (\gamma x_t) + u_t.$$

We can see this is an equilibrium process by taking the ratio of y_t to x_t, the expected value of the ratio will be γ at any time t, i.e. the ratio of y_t to x_t is a series that does not trend—they are co-integrated. To make mathematical manipulation easier, we can take the log of the ratio. The expected value of $z_t = \log(y_t) - \log(x_t)$ is $\log(\gamma)$, a constant for each t (O'Brien 1999), showing that the series resulting from the difference of the logs is a stationary series—i.e. $\log(y_t)$ and $\log(x_t)$ are co-integrated.

Following this logic, we can use the unit root test to test whether any two series y_t and x_t are co-integrated, i.e. if the series $z_t = \log(y_t) - log(x_t)$ has a unit root, then y_t and x_t are not co-integrated. If the series z_t has a unit root and is thus non-stationary, we need to further difference it to eliminate the non-stationarity. After the first difference, we can estimate α to see whether the series z_t has a systematic trend (Hamilton 1994: 562; O'Brien 1999), i.e. we can estimate α in the equation of the form:

$$z_t - z_{t-1} = \alpha + \delta_1(z_{t-1} - z_{t-2}) + \delta_2(z_{t-2} + z_{t-3}) + u_t.$$

If α is positive, z_t systematically trends upward, which indicates that the differences between y_t and x_t systematically increase, so they diverge from each other, i.e. the series y_t increases faster than x_t. If α is negative, the series y_t and x_t converge, i.e. the differences between them get smaller over time. If α is not significantly different from zero, the situation becomes inconclusive. The additional difference terms in the equation are used to eliminate autocorrelations in the error term. The results of the analyses concur with the findings shown in the chart in the paper. The details of the statistical analyses are available upon request from the author.

References

Anderson, A. F. and Gil, V. E. (1998), 'China's Modernization and the Decline of Communitarianism: The Control of Sex Crimes and Implications for the Fate of Informal Social Control', *Journal of Contemporary Criminal Justice*, 14: 248–61.

Archer, D. and Gartner, R. (1984), *Violence and Crime in Cross-National Perspective*. Hartford, CT: Yale University Press.

Ash, R. F. and Kueh, Y. Y. (1996), *The Chinese Economy Under Deng Xiaoping*. Oxford: Oxford University Press.

Avison, W. R. and Loring, P. L. (1986), 'Population Diversity and Cross-National Homicide: The Effects of Inequality and Heterogeneity', *Criminology*, 24: 733–49.

Bennet, R. R. (1991), 'Development and Crime', *Sociological Quarterly* 32: 343–63.

Bian, Y. (1994), *Work and Inequality in Urban China*. Albany, NY: State University of New York Press.

———(2002), 'Chinese Social Stratification and Social Mobility', *Annual Review of Sociology*, 28: 91–116.

Biderman, A. D. and Lynch, J. P. (1991), *Understanding Crime Incidence Statistics: Why the UCR Diverges From the NCS*. New York City: Springer Verlag.

Bonger, W. A. (1916), *Criminality and Economic Conditions*. Boston: Little, Brown, and Co.

Braithewaite, J. and Braithwaite, V. (1980), 'The Effects of Income Inequality and Social Democracy on Homicide: A Cross-National Comparison', *British Journal of Criminology*, 20: 45–53.

CANTOR, D. and LAND, K. C. (1985), 'Unemployment and Crime Rates in the post-World War II United States: A Theoretical and Empirical Analysis', *American Sociological Review*, 50: 317–22.

CLINARD, M. B. and ABBOTT, D. J. (1973), *Crime in Developing Countries*. New York City: Wiley.

CONKLIN, G. H. and SIMPSON, M. E. (1985), 'A Demographic Approach to the Cross-National Study of Homicide', *Comparative Social Research*, 8: 171–86.

DAI, Y. (1994), *On the Policies of Public Security [Lun Gongan Zhence]*. Chongqing, China: Chongqing Press.

———(1995), 'Expanding Economy and Growing Crime', *CJ International*, 11: 9–16.

———(1997), 'Crime Waves and Relative Deprivation in China: Are the "Wolves" Really Coming?'. Presented at the 1997 Annual Meeting of the ASC.

DAVIS, D. S. (1992), 'Job Mobility in Post-Mao Cities', *China Quarterlyi*, 84: 1062–85.

———(2000), *The Consumer Revolution in China*. Berkeley, CA: University of California Press.

DENG, X. and CORDILIA, A. (1999), 'To Get Rich is Glorious: Rising Expectations, Declining Control, and Escalating Crime in Contemporary China', *International Journal of Offender Therapy and Comparative Criminology*, 423: 211–29.

DURKHEIM, É. ([1893] 1933), *The Division of Labor in Society*. New York City: Free Press.

———([1897] 1950), *Suicide: A Study in Sociology*. New York City: Free Press.

DUTTON, M. and LEE, T. (1993), 'Missing the Target? Policing Strategies in the Period of Economic Reform', *Crime and Delinquency*, 39: 316–36.

ELIAS, N. (1978), *The Civilizing Process: The History of Manners*. New York City: Free Press.

ENGELS, F. ([1845] 1958), *The Condition of the Working Class in England*. Oxford: Basil Blackwell.

FENG, S. (2001), 'Crime and Crime Control in a Changing China', in J. H. Liu, L. N. Zhang and S. F. Messner, eds, *Crime and Social Control in a Changing China*, 123–32. Westport, CT: Greenwood Press.

GERBER, T. P. and HOUT, M. (1998), 'More Shock than Therapy: Market Transition in Russia', *American Journal of Sociologyi*, 104: 1–50.

GROVES, W. B., MCCLEARY, R. and NEWMAN, G. R. (1985), 'Religion, Modernization and World Crime', *Comparative Social Research*, 8: 59–78.

HAGEN, E. E. (1962), *On The Theory of Social Change: How Economic Growth Begins*. Homewood, IL: Dorsey.

HAMILTON, J. D. (1994), *Time Series Analysis*. Princeton, NJ: Princeton University Press.

HANSMANN, H. B. and QUIGLEY, J. M. (1982), 'Population Heterogeneity and the Sociogenesis of Homicide', *Social Forces*, 61: 206–24.

HARTNAGEL, T. F. (1982), 'Modernization, Female Social Roles and Female Crime: A Cross-national Investigation', *Sociological Quarterly*, 23: 477–90.

HE, N. and MARSHALL, I. H. (1997), 'Social Production of Crime Data: A Critical Examination of Chinese Crime Statistics', *International Criminal Justice Review*, 7: 46–63.

HUANG, W. S. W. and WELLFORD, C. F. (1989), 'Assessing Indicators of Crime Among International Crime Data Series', *Criminal Justice Policy Review*, 3: 28–47.

INKELES, A. (1983), *Exploring Individual Modernity*. New York City: Columbia University Press.

INKELES, A. and SMITH, D. H. (1974), *Becoming Modern: Individual Change in Six Developing Societies*. Cambridge, MA: Harvard University Press.

KELLEY, L. and LUO, Y. (1999), 'An Introduction to Emerging Business Issues for China 2000', in L. Kelley and Y. D. Luo, eds, *China 2000: Emerging Business Issues*, ix–xx. Thousand Oaks, CA: Sage.

KICK, E. L. and LAFREE, G. D. (1985), 'Development and the Social Context of Murder and Theft', *Comparative Social Research*, 8: 37–58.

KROHN, M. (1976), 'Inequality, Unemployment and Crime: A Cross-national Analysis', *Sociological Quarterly*, 17: 303–13.

———(1978), 'A Durkheimian Analysis of International Crime Rates', *Social Forces*, 57: 654–70.

KROHN, M. and WELLFORD, C. F. (1977), 'A Static and Dynamic Analysis of Crime and the Primary Dimensions of Nations', *International Journal of Criminology and Penology*, 5: 1–16.

LAFREE, G. D. (1999), 'A Summary and Review of Cross-National Comparative Studies of Homicide', in M. D. Smith and M. A. Zahn, eds, *Homicide: A Sourcebook of Social Research*, 125–45. Thousand Oaks, CA: Sage.

LAFREE, G. D. and KICK, E. L. (1986), 'Cross-National Effects of Development, Distributional and Demographic Variables on Crime: A Review and Analysis', *International Annals of Criminology*, 24: 213–36.

LERNER, D. (1958), *The Passing of Traditional Society: Modernizing the Middle East*. New York City: Free Press.

———(1968), 'Modernization: Social Aspects', in D. L. Sills, eds, *International Encyclopedia of the Social Sciences*, 386–94. New York City: Macmillan.

LEVY, M. J. (1966), *Modernization and the Structure of 2 Societies*, 2 volumes. Princeton, NJ: Princeton University Press.

LIN, N. and BIAN, Y. (1991), 'Getting Ahead in Urban China', *American Journal of Sociology*, 97: 657–88.

LIU, J. (2001), 'Social Change and Economically Motivated Crimes in China'. Annual Meetings of American Society of Criminology, Atlanta, 15–19 November.

LIU, J. and MESSNER, S. F. (2001), 'Modernization and Crime Trends in China's Reform Era', in J. H. Liu, L. N. Zhang, and S. F. Messner, eds, *Crime and Social Control in a Changing China*, 3–22. Westport, CT: Greenwood Press.

LYNCH, J. (1995), 'Crime in International Perspective', in J. Q. Wilson and J. Petersilia, eds, *Crime*. San Francisco: ICS Press.

MACDONALD, L. (1976), *The Sociology of Law and Order*. Boulder, CO: Westview.

MACKINNON, J. G. (1991), 'Critical Values for Cointegration Tests', in R. F. Engle and C. W. J. Granger, eds, *Long-Run Economic Relationships: Readings in Cointegration*, 267–76. Oxford: Oxford University Press.

MAXFIELD, M. G., LEWIS, D. A. and SZOC, R. (1980), 'Producing Official Crimes: Verified Crime Reports as Measures of Police Output', *Social Science Quarterly*, 62: 221–36.

MCCLELLAND, D. C. (1961), *The Achieving Society*. Princeton, NJ: Van Nostrand.

MERTON, R. K. (1938), 'Social Structure and Anomie', *American Sociological Review*, 3: 672–82.

MESSNER, S. F. (1980), 'Income Inequality and Murder Rates: Some Cross-National Findings', *Comparative Social Research*, 3: 185–98.

———(1982), 'Societal Development, Social Equality and Homicide: A Cross-national Test of the Durkheimian Model', *Social Forces*, 61: 225–40.

———(1985), 'Sex Differences in Arrest Rates for Homicide: An Application of the General Theory of Structural Strain', *Comparative Social Research*, 8: 187–201.

MESSNER, S. F. and ROSENFELD, R. (1994), *Crime and the American Dream*. Belmont, CA: Wadsworth.

———(1997), 'Political Restraint of the Market and Levels of Criminal Homicide: A Cross-National Application of Institutional-Anomie Theory', *Social Forces*, 75: 1393–416.

NEAPOLITAN, J. (1997), *Cross-National Crime: A Research Review and Sourcebook*. Westport, CT: Greenwood Press.

NEE, V. (1989), 'A Theory of Market Transition', *American Sociological Review*, 54: 663–81.

———(1991), 'Social Inequalities in Reforming State Socialism', *American Sociological Review*, 56: 267–52.

———(1996), 'The Emergence of a Market Society: Changing Mechanisms of Stratification in China', *American Journal of Sociology*, 101: 908–49.

NEE, V. and YANG, C. (1996), 'Stratification in Path Dependent Societal Transformation'. Presented at the 1996 Summer Meetings of the International Sociological Association Research Committee on Social Stratification, Ann Arbor, MI, August.

NEUMAN, W. L. and BERGER, R. J. (1988), 'Competing Perspectives on Cross-National Crime: An Evaluation of Theory and Evidence', *Sociological Quarterly*, 29: 281–313.

O'BRIAN, R. M. (1985), *Crime and Victimization*. Thousand Oaks, CA: Sage.

O'BRIEN, R. M. (1999), 'Measuring the Convergence/Divergence of "Serious Crime" Arrest Rates for Males and Females', *Journal of Quantitative Criminology*, 15: 97–114.

ORTEGA, S. T., CORZINE, J., BURNETT, C. and POYER, T. (1992), 'Modernization, Age Structure and Regional Context: A Cross-National Study of Crime', *Sociological Spectrum*, 12: 257–77.

PARSONS, T. (1966), *Societies: Evolutionary and Comparative Perspectives*. Englewood Cliffs, NJ: Prentice Hall.

———(1977), *The Evolution of Societies*. Englewood Cliffs, NJ: Prentice Hall.

PRC STATE STATISTICAL BUREAU (1990–2004), *Statistical Yearbook of China*. Beijing: China Statistical Publishing House.

PRESS OF LAW YEARBOOK OF CHINA (1987–2000), *Law Yearbook of China*. Beijing: Press of Law Yearbook of China.

ROJEK, D. G. (1996), 'Changing Directions of Chinese Social Control', in C. B. Fields and R. H. Moore, Jr, eds, *Comparative Criminal Justice: Traditional and Nontraditional Systems of Law and Control*, 234–49. Prospect Heights: Waveland.

———(2001), 'Chinese Social Control: From Shaming and Reintegration to "Getting Rich is Glorious" ', in J. H. Liu, L. N. Zhang and S. F. Messner, eds, *Crime and Social Control in a Changing China*, 89–104. Westport, CT: Greenwood.

RÓNA-TAS, Á. (1994), 'The First Shall Be Last', *American Journal of Sociology*, 100: 40–69.

SCHELL, O. (1988), *Discos and Democracy: China in the Throes of Reform*. New York City: Pantheon.

SHELLEY, L. (1981), *Modernization, Age Structure and Regional Context: A Cross-National Study of Crime*. Corbondale, IL: Southern Illinois University Press.

TARDE, G. (1902), *La Criminalite Comparee*. Paris: Flex Alcan.

WALDER, A. G. (1992), 'Property Rights and Stratification in Socialist Redistributive Economies', *American Sociological Review*, 57: 534–9.

———(1994), 'The Decline of Communist Power: Elements of a Theory of Institutional Change', *Theory and Society*, 23: 297–323.

———(1995*a*), 'Career Mobility and the Communist Political Order', *American Sociological Review*, 60: 309–28.

———(1995*b*), 'Local Governments as Industrial Firms: An Organizational Analysis of China's Transitional Economy', *American Journal of Sociology*, 101: 263–301.

———(1996), *China's Transitional Economy*. Oxford: Oxford University Press.

WELLFORD, C. F. (1974), 'Crime and the Dimensions of Nations', *Journal of Criminology and Penology*, 2: 1–10.

WHYTE, M. K. and PARISH, W. L. (1984), *Urban Life in Contemporary China*. Chicago: University of Chicago Press.

XIAO, J. (1988), 'Economic Development and Crime Problem (in Chinese)', *Juvenile Deliquency Studies*, 4: 15.

XIE, Y. and HANNUM, E. (1996), 'Variation in Earnings Inequality in Reform-Era Urban China', *American Journal of Sociology*, 101: 950–92.

YU, L. (1993), *The National Study of the Crime Problem in Modern China (Comprehensive Volume) [Zhongguo Xianjieduan Fanzui Wenti Yanjiou] (Zong Juan)*. Beijing: The University Press of the Chinese University of People's Public Security.

YU, O. and ZHANG, L. (1999), 'The Under-Recording of Crime by Police in China: A Case Study', *Policing: An International Journal of Police Strategies and Management*, 22: 252–63.

ZHOU, X., TUMA, N. B. and MOEN, P. (1996), 'Stratification Dynamics Under State Socialism', *Social Forces*, 74: 759–96.

ZHU, H., WANG, L., LU, J., GUO, J. and ZHOU, L. (1995), 'Result of the Crime (Victim) Survey in Beijing, China', in U. Zvekic, L. X. Wang and R. Scherpenzeel, eds, *Developmental and Policy Use of Criminal Justice Information: Proceedings of the Beijing Seminar, 12–16 September 1994*, 185–217. Rome: United Nations Interregional Crime and Justice Institute.